



## Development of soil evaluation procedure for sustainable agricultural production and environmental conservation

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#### Summary

#### **Backgrounds**

- Soil has a capacity not only to support the plant growth but also to relieve stress to environment.
- Evaluation of soil quality is essential for effective soil utilization and suitable soil management
- Soil tests have been mainly conducted for soil chemical properties. However, biological and physical properties also contribute to agricultural productivity and suitable environment.

#### **Objectives**

- Improvement of the soil evaluation procedure is conducted, especially for labile organic matter, key of agricultural production and environmental conservation.
- Soil physical analysis and biological approach are also adapted for comprehensive evaluation of soil quality.

#### **Major achievements**

- More convenient and rapid procedure for soil labile organic matter determination has been developed.
- Unique soils in urban areas has been surveyed; agricultural fields in urban areas, home garden fields, and horticulture soils on the market etc., since characteristics of these soils are not still understood well in spite of their significance for suitable environment in urban areas.

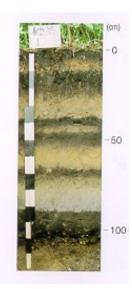
#### **Prospects of collaboration**

### [Collaboration with agriculture, fisheries, livestock, and food industries]

Evaluation of soil improving materials or soil conditions thorough the various soil test methods.



Soils have variation in colors, and also in the function for ecosystem.



Soil profile of the volcanic ash soils. It is important to observe the soils at the fields.



Apparatus for soil physical survey. Soil cores, and two types of the penetrometer.



#### Selling point

Consultation of soilless agricultural system; hydroponics, plant factory, etc., is also welcome, since the principal of these systems is same as soil culture system.